

# What is a Mineral? Worksheet

Name \_\_\_\_\_ Class \_\_\_\_\_

1. Which of the following are **NOT** minerals? How do you know?
  - a. oak tree
  - b. ice cube
  - c. galena
  - d. gold nugget
  - e. a salt crystal
2. Which of the following is NOT part of the definition of a mineral?
  - a. always inorganic (never living)
  - b. a group of minerals bound together
  - c. occurs naturally in the earth
  - d. always a solid
  - e. made of a single element or compound
  - f. occurs in a crystal pattern
3. Could you ever wear a mineral? Explain why or why not?
4. Explain why SNIFC might be a good way to remember the definition of a mineral:

**S** - S \_ \_ \_ \_

**N** - N \_ \_ \_ \_ \_ O \_ \_ \_ \_ \_

**I** - I \_ \_ \_ \_ \_

**F** - Fixed C \_ \_ \_ \_ \_ :  
E \_ \_ \_ \_ \_ or C \_ \_ \_ \_ \_

**C** - C \_ \_ \_ \_ \_

# MINERAL OR NON-MINERAL? LAB

Name \_\_\_\_\_ Class \_\_\_\_\_

All natural earth materials are made of minerals or a combination of minerals. To be called a mineral, a substance must meet **ALL** of the following criteria:

1. **solid** - not a liquid or a gas
2. **naturally occurring** - not artificial or man-made
3. **inorganic** - not alive and never alive
4. **fixed composition** - element or compound
5. **crystal form** - atoms arranged in an orderly pattern

Using the five statements, examine the samples provided and fill in the table below:

SAMPLE	Mineral? or Nonmineral?	WHY?

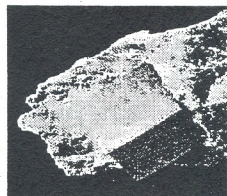
1. What samples were mineral?
2. What samples were non-mineral?
3. What sample gave you the most trouble? Why?
4. Was there one sample you knew to be a mineral immediately? Why?
5. A pearl is a gem, which is a kind of mineral, but not considered a mineral. Why?
6. What two elements make up most minerals? (*HINT: Check your textbook!*)



# Crystal Systems

Table 4-1 Crystal Systems

## Examples



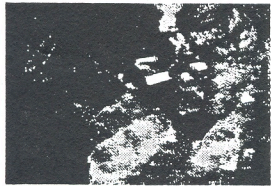
Pyrite



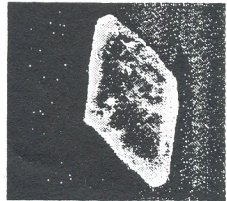
Wulfenite



Pyromorphite



Topaz

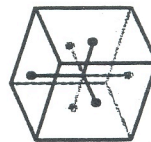


Gypsum

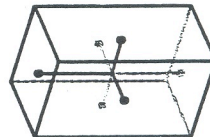


Feldspar

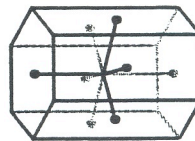
## Systems



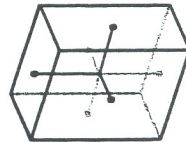
Cubic



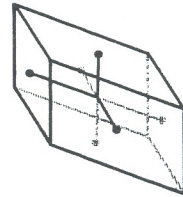
Tetragonal



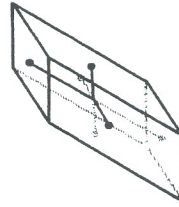
Hexagonal



Orthorhombic



Monoclinic



Triclinic

Use with Chapter 4

CP Section 4.1

APP 3.1

# Crystal Systems

1. What is a crystal?

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2. How many sides do crystals of each of the six major crystal systems have?

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3. Pyromophite is an example of what crystal system?

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4. How would you use crystal structure to tell a crystal of pyrite from a crystal of gypsum?

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5. Name a mineral in the triclinic crystal system.

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6. Under what conditions can minerals grow to form well-defined crystal shapes like those pictured?

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7. Do mineral crystals tend to appear in one of the six well-defined shapes shown in the table? Why or why not?

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8. How are atoms arranged in crystalline structures?

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